

NATURAL RESOURCES - WETLANDS

Town of Eastham Goals and Performance Standards

The Cape Cod Commission, through its Regional Policy Plan for Barnstable County, has established overall planning goals and minimum performance standards for Wetlands. Eastham's goals and minimum performance standards are consistent with the Regional Policy Plan.

- 2.3.1 Goal:** To preserve and restore the quality and quantity of inland and coastal wetlands on Cape Cod.

Minimum Performance Standards

- 2.3.1.1 Wetland alteration shall not be permitted except as provided herein and in Minimum Performance Standard 2.3.3. As an exception, where there is no feasible alternative, water-dependent projects involving wetland alteration with appropriate mitigation may be permitted subject to the approval of all permitting authorities. Such permission may be granted subject to a finding that there is no feasible alternative location for the project and that any necessary alteration is the minimum necessary to accomplish the goals of the project. Appropriate mitigation shall not include wetland creation or replication.
- 2.3.1.2 Vegetated, undisturbed buffer areas of at least 100 feet in width shall be maintained and/or provided from the edge of coastal and inland wetlands including isolated wetlands, to protect their natural functions. This policy shall not be construed to preclude pedestrian access paths, vista pruning, or construction and maintenance of water-dependent structures within the buffer area, any of which may be permitted at the discretion of permitting authorities where there is no feasible alternative to their location. The Eastham local Conservation Commission may require a larger buffer area where necessary to protect sensitive areas or where site conditions such as slopes or soils suggest that a larger buffer area is necessary to prevent any adverse impact to wetlands and associated wildlife habitat. Where a buffer area is already altered such that the required buffer cannot be provided without removal of structures and/or pavement, this requirement may be modified by the permitting authority, provided it makes the following findings: (1) that the proposed alteration will not increase adverse impacts on that specific portion of the buffer area or associated wetland, and (2) that there is no technically demonstrated feasible construction alternative.
- 2.3.1.3 Disturbance of wetlands and buffer areas for operation and maintenance of underground and overhead utility lines (electrical, communication, sewer, water, and gas lines) may occur. Installation of new utility lines through these areas may occur where the permitting authority finds that the proposed route is the best environmental alternative for locating such facilities. In all instances, disturbance of wetland and buffer areas shall be minimized and surface vegetation, topography, and water flow shall be restored substantially to the original condition.

- 2.3.1.4 Stormwater management plans for new development shall preclude direct discharge of untreated stormwater into natural wetlands and water bodies. New stormwater discharges shall be located a minimum of 100 feet from wetlands and water bodies.

Other Development Review Policies

- 2.3.1.5 Measures to restore altered or degraded inland and coastal wetlands, including nonstructural bank stabilization, revegetation, and restoration of tidal flushing should be encouraged; however, such areas should not be used as mitigation for wetland alteration projects (mitigation banking).
- 2.3.1.6 Construction of artificial wetlands for stormwater and wastewater management may be permitted in appropriate areas where there will be no adverse impact on natural wetlands, waterways, and groundwater.
- 2.3.1.7 For agricultural areas in wetlands and buffer areas, management practices that would improve water quality and conserve water as recommended by the National Resources Conservation Service should be encouraged.

Existing Conditions

Wetlands in Eastham include both freshwater wetland and salt marsh vegetation. The salt marsh exhibits definite zones in the arrangement of its plant species. The limits of the marsh zones are determined by plants' responses to varying salinity and the frequency of tidal flooding. This zonation is most easily seen in the occurrences of the marshes' two most dominant plant species: the coarse, broad-leafed salt marsh cord grass (*Spartina alterniflora*) along the edge of the water, and the smaller salt meadow cord grass (*Spartina patens*) common to the largest and intermediate sections. Bordering the upper zone between high marsh and land vegetation is seaside goldenrod, blackrush and panic grass. Higher marsh ground that receives influxes of fresh water is colonized by cattails and phragmites.

Swamps and bogs, whose primary species are red maple, black tupelo, gum, alder, arrow wood, high bush blueberry, willows and milkweed, are found further inland. The climatically associated soils on Cape Cod are podzols. Their existence in this less than normal hostile climate is due to the porosity of the glacial material and the rapid leaching associated with it.

Certain tidal wetlands in Town are impaired due to tidal restrictions. Further details can be found in the *Cape Cod Atlas of Tidally Restricted Salt Marshes* (Cape Cod Commission, 2001) for the Town of Eastham.

Map 5: Wetlands, Wildlife and Plant Habitats

Implementation

Recommended Town Actions

- A. Wetlands and vernal pool should be mapped, identified, and protected so as to maintain their ability to provide natural functions. Local schools should be encouraged to participate in this effort.
- B. Adopt a wetlands bylaw that provides for the following: protection of vernal pools outside other resource areas as well as isolated wetlands, a policy of no alteration/replication of wetlands for both public and private applicants, expansion of jurisdiction beyond 100 feet where appropriate, improved enforcement authority, and the ability to hire consultants to review applications at the applicant's expense.
- C. The Conservation Commission should work closely with the Board of Health and other relevant town boards to develop mutually acceptable policies for wetland boundary delineation and the siting of new subsurface disposal systems in relation to these areas as well as improving and retrofitting areas with failing systems.
- D. Develop and implement plans to address existing stormwater management problems where runoff and drainage systems are adversely affecting water quality in wetlands and water bodies.
- E. Seek ways to remedial tidal restrictions, including incorporating improvements to restricted areas into planned road and bridgework and by seeking funding and partnering opportunities with the state and affected private entities.
- F. Conduct an analysis to assess potential growth impacts to wetland areas, identifying those that are protected as well as those threatened by development. The map developed for the analysis should be used to develop strategies to address identified threats.

See “Wetlands” and “Wildlife and Habitat” in the Implementation section.

NATURAL RESOURCES - WILDLIFE AND PLANT HABITAT

Town of Eastham Goals and Performance Standards

The Cape Cod Commission, through its Regional Policy Plan for Barnstable County, has established overall planning goals and minimum performance standards for Wetlands. Eastham's goals and minimum performance standards are consistent with the Regional Policy Plan.

- 2.4.1 Goal:** To prevent loss or degradation of critical wildlife and plant habitat to minimize the impact of new development on wildlife and plant habitat and to maintain existing populations and species diversity.

Minimum Performance Standards

- 2.4.1.1 Developments shall be planned to minimize impacts to wildlife and plant habitat. Natural resources inventories shall be prepared in accordance with the Plant and Wildlife Habitat Assessment Guidelines, Technical Bulletin 92-002.
- 2.4.1.2 Clearing of vegetation and alteration of natural topography shall be minimized, with native vegetation planted as needed to enhance or restore wildlife habitat. Standing specimen trees shall be protected. The permitting authority may require designation of building envelopes (for structures, driveways, lawns, etc.), where appropriate, to limit removal of vegetation.
- 2.4.1.3 Fragmentation of wildlife and plant habitat shall be minimized by the establishment of greenways and wildlife corridors of sufficient width to protect not only edge species but also species that inhabit the interior forest, as well as by the protection of large unfragmented areas, and the use of open space or cluster development. Wildlife shall be provided with opportunities for passage under or across roads and through developments where such opportunities will maintain the integrity of wildlife corridors. Fencing shall not be constructed so as to interfere with identified wildlife migration corridors.
- 2.4.1.4 Developments that would adversely affect habitat of local populations of rare wildlife and plants shall not be permitted. Development may be permitted where the proponent can demonstrate that such development will not adversely affect such habitat. A wildlife and plant habitat management plan may be required as a condition of approval when development or redevelopment is permitted in critical wildlife and plant habitat areas.
- 2.4.1.5 Where a project site is located adjacent to a vernal pool (as defined herein) or within or adjacent to wetland-dependent rare species habitat, development shall be prohibited within a 350-foot undisturbed buffer around these wetland resources. New stormwater discharges shall be located a minimum of 100 feet from vernal pools.

- 2.4.1.6 Development on sites where a natural resources inventory identifies the presence of invasive plant species shall provide and implement a management and restoration plan detailing the management of, and where possible, the eradication of the invasive species present, and for revegetating the site with native species.

Other Development Review Policies

- 2.4.1.7 Measures to restore altered or degraded upland habitat areas should be encouraged where ecologically appropriate (e.g., sandplain grasslands, Pine Barrens, etc.).

Existing Conditions

Eastham's original forest was stripped in the early years of the area's settlement. With soil depletion from agricultural activities and wind action in exposed areas, along with frequent forest fires and repeated cutting, regrowth of most species has been inhibited. The present forests of the Cape are classified as pine-oak climax forests. The oak species most common include scrub oak, white oak, red oak and pin oak. The most prevalent pine variety is the pitch pine, which dominates this area characterized by poor dry soils. In addition to the forested areas, Eastham is also characterized by freshwater wetland and salt marsh vegetation as described in the previous section.

An unusually diverse array of coastal habitats provides for a correspondingly high diversity of coastal organisms. Outer Cape Cod, although somewhat isolated from the mainland, nevertheless attracts many "mainland" birds and mammals, and is especially important to migratory species. In addition, its unique geographical position and ocean-moderated climate are in part responsible for the presence of many plants and animals at the limits of their geographical range. A newcomer to the area, Eastern coyote populations have become well established in Eastham within the past ten years.

Wetlands and wetland-dependent flora and fauna predominate. Most important game animals, as well as "passively" enjoyed songbirds, raptors, colonial waterbirds, reptiles, amphibians and of course fish, depend on wetland habitats for food and cover. Coastal swamps, marshes and wet meadows are habitat for deer, muskrat, raccoon, red fox, cottontail rabbits, woodcock, and migratory waterfowl. The shrubby borders of coastal marshlands and kettlehole swamps provide outstandingly good feeding and nesting cover for songbirds and small mammals.

Several agencies are compiling and updating information on rare, threatened, or endangered species and many local people provide information to these agencies based on extensive local observation. Scientific staff of the Cape Cod National Seashore monitors rare species within the Park. The U.S. Fish and Wildlife Service conducts field investigations on nationally significant species. The Massachusetts Natural Heritage Program (Department of Fisheries and Wildlife) maintains an ongoing inventory of rare, threatened and endangered plants and animal species, as well as the geographic locations of critical ecosystems. The review by the Massachusetts Natural Heritage Program shows Eastham to be important to a large number of state and/or federally designated rare, threatened or endangered "species."

Implementation

Recommended Town Actions

- A. Wetlands and vernal pool should be mapped, identified, and protected so as to maintain their ability to provide natural functions. Local schools should be encouraged to participate in this effort.
- B. Develop a review process for activities in critical plant and wildlife habitat areas that could adversely impact such habitat and/or seek designation as significant habitat areas under the Massachusetts Endangered Species Act.
- C. Adopt by-laws/ordinances limiting land clearing and alteration of natural topography prior to development review.
- D. Conduct an analysis to assess potential growth impacts to wildlife and plant habitat areas, identifying those that are protected as well as those threatened by development. The map developed for the analysis should be used to develop strategies to address identified threats.

See “Wildlife and Habitat” and “Wetlands” in the Implementation section.

this page intentionally left blank